

	sq. km	sq. mi	FIA Plots
Area of Region	8,700.0	3,359.1	323

Species Information

The columns below provide brief summaries of the species associated with the region and described in the table on the next pages. Definitions are provided in the Excel file for this region.

Genus	Species	Abundance		Model		Potential Change in Habitat Suitability		Capability to Cope or Persist		Migration Potential					
				Reliability	Adaptability	Scenario RCP45	Scenario RCP85	Scenario RCP45	Scenario RCP85	SHIFT RCP45	SHIFT RCP85				
Ash	2			High	13	19	Increase	28	34	Very Good	9	12	Likely	1	1
Hickory	6			Medium	35	51	No Change	15	12	Good	19	19	Infill	8	14
Maple	1	Abundant	6	Low	32	10	Decrease	23	20	Fair	8	8	Migrate	1	0
Oak	16	Common	13	FIA	1		New	5	6	Poor	7	9		10	15
Pine	5	Rare	48				Unknown	10	9	Very Poor	17	14			
Other	37	Absent	11							FIA Only	0	0			
	67		78		81	80		81	81	Unknown	9	8			
											69	70			

Potential Changes in Climate Variables

Temperature (°F)

	Scenario	2009	2039	2069	2099	
Annual Average	CCSM45	65.9	67.5	69.3	69.4	
	CCSM85	65.9	67.7	70.1	72.5	
	GFDL45	65.9	68.5	70.2	71.0	
	GFDL85	65.9	68.3	71.3	74.6	
	HAD45	65.9	68.1	70.8	72.0	
	HAD85	65.9	68.4	72.0	75.6	
Growing Season May—Sep	CCSM45	78.2	79.5	80.9	81.3	
	CCSM85	78.2	79.6	82.0	84.8	
	GFDL45	78.2	80.8	82.4	83.9	
	GFDL85	78.2	80.7	83.7	87.6	
	HAD45	78.2	81.1	83.5	84.5	
	HAD85	78.2	81.2	86.0	89.2	
Coldest Month Average	CCSM45	47.3	49.5	50.3	50.1	
	CCSM85	47.3	49.7	50.9	52.0	
	GFDL45	47.3	50.8	50.9	51.1	
	GFDL85	47.3	48.9	49.9	50.5	
	HAD45	47.3	47.4	49.1	49.9	
	HAD85	47.3	48.8	50.1	51.8	
Warmest Month Average	CCSM45	81.6	82.8	83.3	83.4	
	CCSM85	81.6	82.8	83.9	85.6	
	GFDL45	81.6	84.5	84.9	85.8	
	GFDL85	81.6	83.8	85.1	87.2	
	HAD45	81.6	85.3	86.8	87.1	
	HAD85	81.6	85.6	88.5	89.7	

Precipitation (in)

	Scenario	2009	2039	2069	2099	
Annual Total	CCSM45	61.7	64.2	69.3	68.0	
	CCSM85	61.7	65.4	66.4	71.2	
	GFDL45	61.7	68.8	73.2	71.5	
	GFDL85	61.7	67.7	69.6	70.6	
	HAD45	61.7	59.9	64.1	66.0	
	HAD85	61.7	66.3	58.7	61.5	
Growing Season May—Sep	CCSM45	26.2	27.5	28.7	28.6	
	CCSM85	26.2	25.7	27.0	28.0	
	GFDL45	26.2	31.2	34.6	31.7	
	GFDL85	26.2	31.4	33.9	35.2	
	HAD45	26.2	25.0	26.6	27.2	
	HAD85	26.2	27.4	21.3	22.0	

NOTE: For the six climate variables, four 30-year periods are used to indicate six potential future trajectories. The period ending in 2009 is based on modeled observations from the PRISM Climate Group and the three future periods were obtained from the NASA NEX-DCP30 dataset. Future climate projections from three models under two emission scenarios show estimates of each climate variable within the region. The three models are CCSM4, GFDL CM3, and HadGEM2-ES and the emission scenarios are the 4.5 and 8.5 RCP. The average value for the region is reported, even though locations within the region may vary substantially based on latitude, elevation, land-use, or other factors.

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Current and Potential Future Habitat, Capability, and Migration

Common Name	Scientific Name	Range	MR	%Cell	FIAsum	FIAiv	ChngCl45	ChngCl85	Adap	Abund	Capabil45	Capabil85	SHIFT45	SHIFT85	SSO	N
loblolly pine	Pinus taeda	WDH	High	95.4	2851.4	29.9	No change	No change	Medium	Abundant	Good	Good			1	1
slash pine	Pinus elliotii	NDH	High	74.7	1501.3	20.1	No change	No change	Medium	Abundant	Good	Good			1	2
longleaf pine	Pinus palustris	NSH	Medium	69	844.0	12.2	Sm. inc.	Sm. inc.	Medium	Abundant	Very Good	Very Good			1	3
water oak	Quercus nigra	WDH	High	92	720.2	7.8	Sm. inc.	Sm. inc.	Medium	Abundant	Very Good	Very Good			1	4
sweetbay	Magnolia virginiana	NSL	Medium	82.8	600.4	7.3	Sm. inc.	Sm. inc.	Medium	Abundant	Very Good	Very Good			1	5
blackgum	Nyssa sylvatica	WDL	Medium	92	508.1	5.5	No change	No change	High	Abundant	Very Good	Very Good			1	6
red maple	Acer rubrum	WDH	High	85.1	400.8	4.7	No change	Sm. inc.	High	Common	Good	Very Good			1	7
sweetgum	Liquidambar styraciflua	WDH	High	79.3	348.7	4.4	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good			1	8
yellow-poplar	Liriodendron tulipifera	WDH	High	63.2	269.7	4.3	Sm. dec.	Sm. dec.	High	Common	Fair	Fair			1	9
southern red oak	Quercus falcata	WDL	Medium	64.4	226.5	3.5	Sm. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	10
swamp tupelo	Nyssa biflora	NDH	Medium	41.4	205.8	5.0	Sm. inc.	Sm. inc.	Low	Common	Fair	Fair			1	11
American holly	Ilex opaca	NSL	Medium	54	201.5	3.7	No change	No change	Medium	Common	Fair	Fair			1	12
laurel oak	Quercus laurifolia	NDH	Medium	55.2	153.5	2.8	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	13
shortleaf pine	Pinus echinata	WDH	High	28.7	120.6	4.2	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	14
flowering dogwood	Cornus florida	WDL	Medium	63.2	114.1	1.8	No change	No change	Medium	Common	Fair	Fair			1	15
post oak	Quercus stellata	WDH	High	54	110.1	2.0	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	16
black cherry	Prunus serotina	WDL	Medium	59.8	101.1	1.7	Lg. inc.	Lg. inc.	Low	Common	Good	Good			1	17
white oak	Quercus alba	WDH	Medium	35.6	75.1	2.1	Sm. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	18
willow oak	Quercus phellos	NSL	Low	17.2	53.1	3.1	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good			1	19
southern magnolia	Magnolia grandiflora	NSL	Low	23	41.7	1.8	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	20
bald cypress	Taxodium distichum	NSH	Medium	8	36.5	4.5	No change	Sm. inc.	Medium	Rare	Poor	Fair	Infill +	Infill +	1	21
redbay	Persea borbonia	NSL	Low	33.3	31.3	0.9	Sm. inc.	Lg. inc.	High	Rare	Good	Good			1	22
sycamore	Platanus occidentalis	NSL	Low	4.6	30.0	6.5	Sm. dec.	No change	Medium	Rare	Very Poor	Poor		Infill +	1	23
swamp chestnut oak	Quercus michauxii	NSL	Low	8	28.0	3.5	No change	No change	Medium	Rare	Poor	Poor			1	24
mockernut hickory	Carya alba	WDL	Medium	26.4	28.0	1.1	Lg. inc.	Lg. inc.	High	Rare	Good	Good			1	25
sourwood	Oxydendrum arboreum	NDL	High	18.4	27.7	1.5	No change	Sm. dec.	High	Rare	Fair	Poor			1	26
water hickory	Carya aquatica	NSL	Medium	5.7	22.9	4.0	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			2	27
blackjack oak	Quercus marilandica	NSL	Medium	17.2	21.7	1.3	Lg. inc.	Lg. inc.	High	Rare	Good	Good			1	28
American beech	Fagus grandifolia	WDH	High	9.2	21.6	2.4	Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair	Infill +	Infill +	2	29
turkey oak	Quercus laevis	NSH	Medium	9.2	21.5	2.3	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			1	30
green ash	Fraxinus pennsylvanica	WSH	Low	6.9	20.1	2.9	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good	Infill +	Infill ++	1	31
spruce pine	Pinus glabra	NSL	Low	18.4	19.7	1.1	Lg. dec.	Very Lg. dec.	Medium	Rare	Very Poor	Lost			0	32
overcup oak	Quercus lyrata	NSL	Medium	4.6	19.1	4.2	No change	Sm. inc.	Low	Rare	Very Poor	Poor		Infill +	2	33
common persimmon	Diospyros virginiana	NSL	Low	28.7	18.0	0.6	Lg. dec.	Sm. dec.	High	Rare	Poor	Poor			1	34
American hornbeam; musclev	Carpinus caroliniana	WSL	Low	10.3	15.7	1.5	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	35
water tupelo	Nyssa aquatica	NSH	Medium	4.6	15.6	3.4	No change	No change	Low	Rare	Very Poor	Very Poor			2	36
live oak	Quercus virginiana	NDH	High	4.6	15.1	3.3	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	37
cherrybark oak; swamp red o	Quercus pagoda	NSL	Medium	10.3	14.4	1.4	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	38
sassafras	Sassafras albidum	WSL	Low	13.8	11.3	0.8	Sm. dec.	Lg. inc.	Medium	Rare	Very Poor	Good			1	39
eastern cottonwood	Populus deltoides	NSH	Low	1.1	9.9	8.7	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	40
eastern redcedar	Juniperus virginiana	WDH	Medium	3.4	8.3	2.4	Sm. dec.	No change	Medium	Rare	Very Poor	Poor		Infill +	2	41
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	4.6	8.0	1.8	Sm. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	1	42
shagbark hickory	Carya ovata	WSL	Medium	1.1	5.0	4.4	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	43
bluejack oak	Quercus incana	NSL	Low	2.3	4.8	2.1	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			2	44
serviceberry	Amelanchier spp.	NSL	Low	2.3	4.7	2.1	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	45
sugarberry	Celtis laevigata	NDH	Medium	3.4	3.9	1.1	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	46
Nuttall oak	Quercus texana	NSH	Medium	1.1	3.9	3.4	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			0	47

Current and Potential Future Habitat, Capability, and Migration

Common Name	Scientific Name	Range	MR	%Cell	FIAsum	FIAiv	ChngCl45	ChngCl85	Adap	Abund	Capabil45	Capabil85	SHIFT45	SHIFT85	SSO	N
river birch	Betula nigra	NSL	Low	2.3	3.6	1.6	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	48
pignut hickory	Carya glabra	WDL	Medium	4.6	3.0	0.7	No change	No change	Medium	Rare	Poor	Poor		Infill +	2	49
black oak	Quercus velutina	WDH	High	4.6	2.9	0.6	Lg. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	50
black willow	Salix nigra	NSH	Low	3.4	2.5	0.7	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair		Infill +	2	51
cedar elm	Ulmus crassifolia	NDH	Medium	1.1	2.2	1.9	No change	Lg. inc.	Low	Rare	Very Poor	Fair		Infill +	2	52
white ash	Fraxinus americana	WDL	Medium	2.3	1.9	0.8	No change	No change	Low	Rare	Very Poor	Very Poor			2	53
American elm	Ulmus americana	WDH	Medium	3.4	1.6	0.5	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	54
eastern redbud	Cercis canadensis	NSL	Low	2.3	1.4	0.6	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0	55
pecan	Carya illinoensis	NSH	Low	1.1	1.1	0.9	Very Lg. dec.	No change	Low	Rare	Lost	Very Poor			2	56
winged elm	Ulmus alata	WDL	Medium	2.3	0.9	0.4	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	57
slippery elm	Ulmus rubra	WSL	Low	1.1	0.9	0.8	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0	58
pond cypress	Taxodium ascendens	NSH	Medium	1.1	0.8	0.7	Very Lg. dec.	Lg. inc.	Medium	Rare	Lost	Good			0	59
water elm	Planera aquatica	NSL	Low	1.1	0.8	0.7	Very Lg. dec.	Sm. dec.	Medium	Rare	Lost	Very Poor			2	60
bigleaf magnolia	Magnolia macrophylla	NSL	Low	2.3	0.8	0.3	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	61
red mulberry	Morus rubra	NSL	Low	1.1	0.7	0.6	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0	62
chinkapin oak	Quercus muehlenbergii	NSL	Medium	1.1	0.6	0.5	No change	Sm. dec.	Medium	Rare	Poor	Very Poor			0	63
cucumbertree	Magnolia acuminata	NSL	Low	1.1	0.5	0.4	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	64
black hickory	Carya texana	NDL	High	1.1	0.5	0.4	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	65
paulownia	Paulownia tomentosa	NSL	FIA	1.1	0.5	0.4	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	66
pawpaw	Asimina triloba	NSL	Low	1.1	0.3	0.3	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	67
Atlantic white-cedar	Chamaecyparis thyoides	NSH	Low	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat	Migrate +		3	68
Table Mountain pine	Pinus pungens	NSL	Low	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown			0	69
florida maple	Acer barbatum	NSL	Low	0	0	0	Unknown	Unknown	High	Modeled	Unknown	Unknown			0	70
striped maple	Acer pensylvanicum	NSL	Medium	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat			3	71
silver maple	Acer saccharinum	NSH	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			3	72
bitternut hickory	Carya cordiformis	WSL	Low	0	0	0	Unknown	Unknown	High	Modeled	Unknown	Unknown			0	73
black ash	Fraxinus nigra	WSH	Medium	0	0	0	Unknown	New Habitat	Low	Absent	Unknown	New Habitat			3	74
silverbell	Halesia spp.	NSL	Low	0	0	0	New Habitat	Unknown	Medium	Absent	New Habitat	Unknown			3	75
black walnut	Juglans nigra	WDH	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	76
pin cherry	Prunus pensylvanica	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	77
scarlet oak	Quercus coccinea	WDL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	78
northern red oak	Quercus rubra	WDH	Medium	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown			0	79
cabbage palmetto	Sabal palmetto	NDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	80
American basswood	Tilia americana	WSL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	81